

Appl. No. 09/970,453

Amdt. dated January 27, 2006

Reply to Office Action of September 29, 2005

PATENT**REMARKS**

Claims 1, 3-4, 7, and 10-13 were pending in this application. No claims have been amended, canceled or added. Hence, claims 1, 3-4, 7, and 10-13 remain pending.

Reconsideration and allowance of the present application based on the following remarks is respectfully requested.

Information Disclosure Statement

With regard to the alleged objection to the Information Disclosure Statement, Applicants do not understand what aspects of the Information Disclosure Statements are objectionable. Applicants are not attempting to present an improper information disclosure statement by way of a listing of references in the specification. All citations have been presented to the Examiner by way of Information Disclosure Statements. Further, an additional Supplemental Information Disclosure Statement was submitted on September 15, 2005, which is not enclosed with the present Office Action. Applicant request an Examiner initialed copy of the Supplement Information Disclosure Statement with the next correspondence from the Examiner indicating consideration of the cited references. In any event, clarification or withdrawal of this objection is respectfully requested.

35 U.S.C. §103 Rejections**1. Rejection Over Kopf in view of Kosaka**

Claims 1, 3, and 4 stand rejected under 35 U.S.C. §103 (a) as being unpatentable over U.S. Pat. No. 6,613,512 or U.S. Pat. No. 6,524,790 (collectively "Kopf" in light of their duplicate disclosure) in view of Kosaka Tokihiro, JP 07049301 A - English Abstract only (hereinafter "Kosaka"). This rejection is respectfully traversed for at least the reasons which follow.

The Examiner acknowledges that Kopf does not teach sample detection at a plurality of detection zones between a first position and a second position. However, in support of the rejection, the Examiner alleges that Kosaka discloses a particle analyzer that achieves higher image resolution of moving particles at different points. Thus, the Examiner asserts that

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"[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to use dual detection zones [...] as taught by Kosaka Tokihiro in either method of Kopf-Sill et al. [...] because Kosaka Tokihiro taught that dual detection zones achieved higher image resolution in a direction of the flow of the particles." Applicants respectfully traverse.

To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. The teaching or suggestion to make the claimed combination must be found in the prior art, and not be based on applicants' disclosure. See *M.P.E.P.* §§2143.01 and 2143.03.

Kopf describes the determination of a reaction rate through measurement of a concentration of products and reactants at a single selected position in a flow, and determining a velocity of a component of the flow. See Kopf, Col. 2, ll. 6-23. While the Examiner acknowledges that the concentration is measured only at a single detection point, the Examiner takes the position that it would be obvious to modify the teachings of Kopf based on the teachings of Kosaka to arrive at the present invention.

Kosaka on the other hand is directed to achieving higher image resolution of particles in flow. Initially, it is submitted that one of skill would not look to modify the teachings of Kopf with those of Kosaka. Kopf is concerned with monitoring the reaction rates of a reaction conducted in a microscale fluidic device facilitated by consideration of the velocity of the components in the reaction. In general, Kopf utilizes fluorescence to monitor the reaction rates and reactant/product concentrations. In an unrelated approach, Kosaka looks to use multiple detectors to improve image resolution of particles in fluid flow. Kosaka exposes partial images of moving particles at different detector points to improve the overall image resolution. Initially, it is submitted that one of skill would not be concerned with improving "image resolution" in the fluorescence studies of Kopf. Further, it is submitted that capturing partial images of the same particle at time varied points to resolve a single "image" data point, as taught by Kosaka, would not be of interest to one of skill in the art involved in the study of reaction rates as in Kopf, as the concentrations of the various particles will vary with time. Based on such

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teachings taken as a whole, one of skill would not look to modify the teachings of Kopf with the teachings of Kosaka so as to arrive at the presently claimed invention. For at least these reasons, it is submitted that the claims are patentable over the cited prior art.

Even assuming *arguendo* that one of skill were to combine the teachings of Kopf and Kosaka, it is submitted that one of skill would still not arrive at the present invention. Whatever else Kosaka may disclose, it does not teach or suggest detection zones which are separated "along a flow path of the analyte." Although Kosaka may reference two detection zones with sensors A1 and A2, these zones are not aligned along the flow path of the analyte. As shown in Fig. 1 and 2 of Kosaka, both of the line sensors A1 and A2 are not located in the flow directions. Rather, line sensor A2 senses the light from the emission lamp *via* half mirror 22 at an angle perpendicular to the flow path of the particle to be imaged. As such, both of the detection zones A1 nor A2 are not "along a path of the analyte." Contrary to this, the present claims recite measuring the characteristic parameter of the analyte within the fluid flow channel at a plurality of different detection zones separated along a flow path of the analyte in between the first and the second positions.

For at least these reasons, it is submitted that the claims are patentable over Kopf in view of Kosaka, and withdrawal of this rejection is respectfully requested.

2. Rejection Over Kopf and Kosaka in view of Squire

Claim 7 stands rejected under 35 U.S.C. §103(a) as unpatentable over Kopf in view of Kosaka, and further in view of *J. Microscopy*, 197(2) 2/2000, 136 – 149 (hereinafter "Squire"). This rejection is respectfully traversed. Whatever else Squire may disclose, it does not remedy the deficiencies of Kopf and Kosaka, as described above. As such, it is submitted that the claims are patentable over the cited art, and withdrawal of this rejection is respectfully requested.

3. Rejection Over Kopf and Kosaka in view of Armstrong

Claims 10-13 stand rejected under 35 U.S.C. §103(a) as unpatentable over Kopf in view of Kosaka, and further in view of *Cytometry*, 40:102-108, 2/2000 (hereinafter "Armstrong"). This rejection is respectfully traversed. Whatever else Armstrong may disclose,

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it does not remedy the deficiencies of Kopf and Kosaka, as described above. As such, it is submitted that the claims are patentable over the cited art, and withdrawal of this rejection is respectfully requested.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-571-4000.

Respectfully submitted,


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